THIRTY-EIGHT PLATES,

WITH

EXPLANATIONS;

INTENDED TO ILLUSTRATE

LINNÆUS's SYSTEM OF VEGETABLES,

AND PARTICULARLY ADAPTED TO THE

LETTERS ON THE ELEMENTS OF BOTANY.

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ADVERTISEMENT.

Some persons, who have honoured the *Letters on the Elements of Botany* with their approbation, having signified a wish that the subject might be still farther illustrated by figures, Mr. Nodder, an ingenious artist, has been employed for this purpose, and has both drawn and engraved thirty-eight plates. By these, and the explanations which are given on the opposite page, the Author hopes that he may have met the ideas of his friends.

These plates, with their explanations, may be considered as an entire work: but

it is presumed that they will be much more satisfactory when studied jointly with the letters: accordingly they are referred to in every plate: and, that each edition might be equally useful, the former figures always refer to the first edition, and the latter figures to the second.

Six plates are given to illustrate Rousseau's six letters upon the most remarkable Natural Classes. The rest are intended to explain the Classes of Linnæus's System, in their order, except the thirty-fourth, which exhibits figures of the most remarkable Nectaries. No general plate, explanatory of the classical characters, is given; both because it has already been elegantly done by Mr. Curtis, and also may easily be collected from the particular plates of this work.

Thus the character of the Class

MONANDRIA is explained in —	Plate VII.
DIANDRIA — — —	VIII.
TRIANDRIA DIGYNIA — —	IX.
——— MONOGYNIA — —	X.
TETRANDRIA — — —	XI.
PENTANDRIA MONOGYNIA —	XII.
——— DIGYNIA —	V. and XIII.
HEXANDRIA — —	I. and XIV.
HEPTANDRIA / OCTANDRIA — —	XV.
ENNEANDRIA / DECANDRIA — —	XVI.
DODECANDRIA — —	XVII.
ICOSANDRIA — —	XVIII.
POLYANDRIA — —	XIX.
DIDYNAMIA — —	IV. and XX.
TETRADYNAMIA — —	II. and XXI.
MONADELPHIA — —	XXII.
DIADELPHIA — —	III. and XXIII.
POLYADELPHIA — —	XXIV.
SYNGENESIA — — —	VI.
——— POLYGAMIA ÆQUALIS —	XXV.
——————— SUPERFLUA	XXVI.

SYNGENESIA

SYNGENESIA POLYGAMIA FRUSTRANEA and } XXVII.
——— ——— ——— ——— NECESSARIA }
——— ——— ——— ——— SEGREGATA XXVIII.
——— ——— MONOGAMIA — XXIX.
GYNANDRIA — — XXX.
MONOECIA — — — XXXI.
DIOECIA — — — XXXII.
POLYGAMIA — — XXXIII.
CRYPTOGAMIA, FILICES — — XXXV.
——— ——— MUSCI — — XXXVI.
——— ——— ALGÆ — — XXXVII.
——— ——— FUNGI — — XXXVIII.

PLATE

BOOKS

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1. Letters on the Elements of BOTANY. Addreſſed to a Lady, by the celebrated J. J. ROUSSEAU. Tranſlated into Engliſh, with Notes, and twenty-four additional Letters, fully explaining the Syſtem of Linnæus. By THOMAS MARTYN, B. D. Profeſſor of Botany in the Univerſity of Cambridge. The Second Edition. Price Seven Shillings, in Boards.

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By the Reverend GILBERT WHITE, M. A. Fellow of Oriel College, in Oxford.

Pl. I.

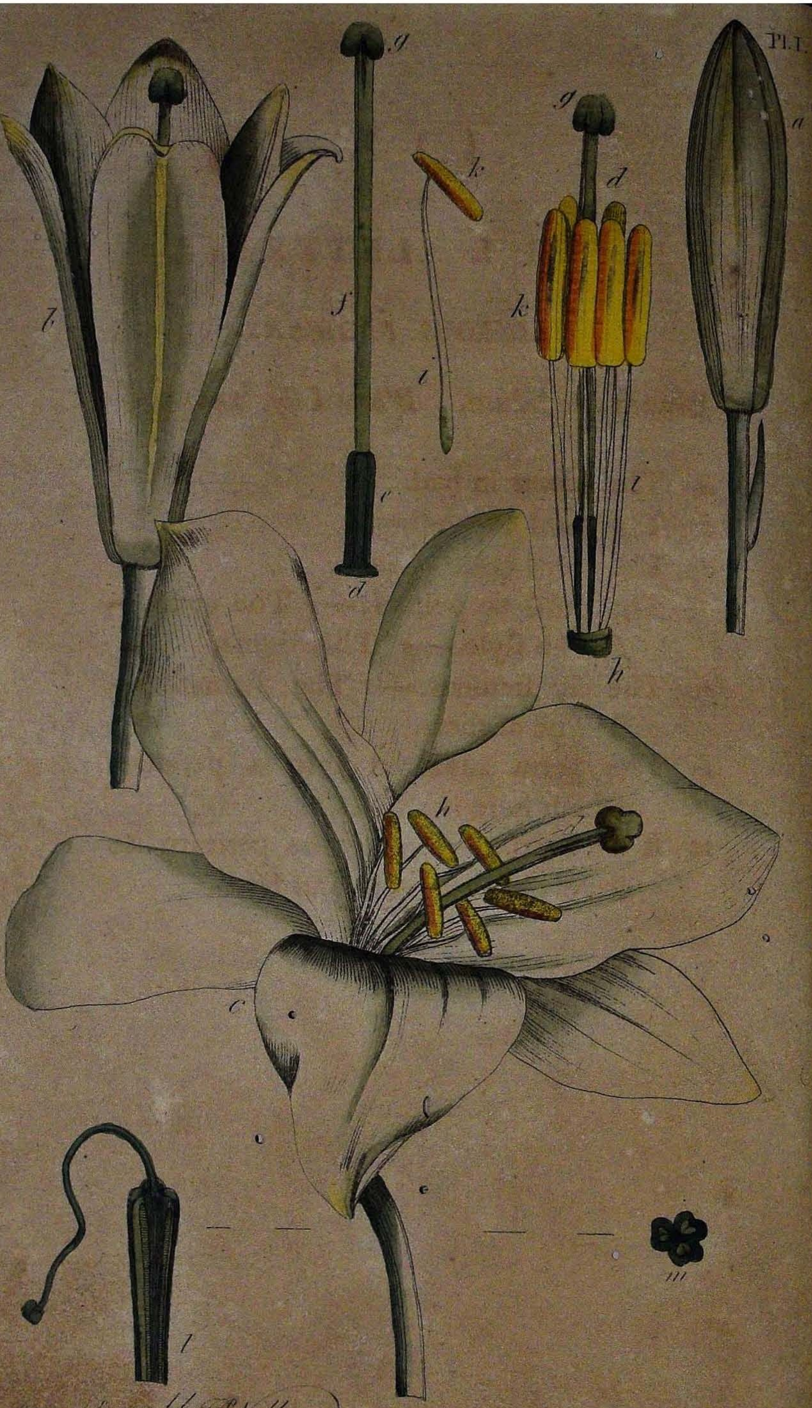

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PLATE I. LETTER I.

LILIACEOUS FLOWERS.

Lilium candidum. *White Lily.* 24—22.

a The flower in bud.
b The corol expanding.
c The corol quite open.
d The piſtil or pointal.—*e* The germ.—*f* The ſtyle.—*g* The ſtigma.
h The ſix ſtamens.—*i* The filaments.—*k* The anthers.
l The germ advanced into a pericarp, which here is a capſule.
m A tranſverſe ſection of the pericarp, to ſhow the three cells and ſeeds.

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PLATE II. LETTER II.

CRUCIFORM FLOWERS.

Cheiranthus incanus. *Stock-Gilliflower.*

a A flower of the ſtock, ſhowing the four petals and the cruciform ſhape of the corol.

b A back view of it, exhibiting the calyx, conſiſting of four leaflets, and bulging out at the bottom.

c A ſingle petal ſeparated, to ſhow the lower narrow part, called *unguis*, or the tail; and the upper ſpreading part, named *lamina*, or the border, emarginated or notched at the end.

d A ſection of the calyx, with the ſingle piſtil and ſix ſtamens in their proper ſituation.

e The ſix ſtamens, two of which are ſenſibly ſhorter than the other four.

f The piſtil ſeparated from the other parts.

g A ſingle ſtamen.

h The fruit, ſeed-veſſel, or pericarp, called a ſilique, opening from the bottom

upwards, and ſhowing the two valves, with the ſeeds ranged along the diſſepiment, or partition, of the two cells, and the permanent ſtigma at the top.

i k l Figures of ſilicles, or ſmall ſhort pods.

i The flat triangular, or heart-ſhaped ſilicle of the ſhepherd's purſe.

k The oblong ſilicle of ſcurvy-graſs, both ſhut and open.

l The almoſt ſpherical ſilicle of candy-tuft. *See Letter* XXIII. *p.* 327—324. *and plate* XXI.

e Explains the claſſical character of the claſs *Tetradynamia*, p. 97—92. and

h i k l Explain the characters of the two orders, *Siliquoſa* and *Siliculoſa*, into which it is divided, p. 104—99.

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PLATE III. LETTER III.

PAPILIONACEOUS FLOWERS.

Piſum ſativum. *Garden Pea.* 36—34.

Fig. 1. The peduncle or flower-ſtem of the pea, ſhowing the papilionaceous corol in three different ſituations.

a A young flower not fully expanded.

b An expanded flower, ſhowing the back; the ſtandard, or banner, fully diſplayed, and the calyx cleft into five parts.

c A ſide view of an expanded flower, ſhowing the banner, wings, and keel, in their natural ſituation.

Fig. 2. The banner *(vexillum)*, obcordate or inverſely heart-ſhaped, and emarginate.

3. The two wings *(alæ)*.

4. The keel *(carina)*.

5. The piſtil and ſtamens in their natural ſituation.

Fig. 6. The lower broad ſtamen, which involves the germ, terminating in nine filaments, with an anther on each.

7. The upper narrow filament, accompanied with the piſtil.

8. The pericarp, which is a legume, or pod, open to ſhow the two valves and the ſeeds faſtened alternately to the ſutures of the valves at the back of the legume. The permanent calyx is alſo here exhibited.

Obſ. The character of the claſs *Diadelphia*, and of the order *Decandria*, as alſo of the natural claſs of *Leguminous* plants, is here explained.

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PLATE IV. LETTER IV.

RINGENT FLOWERS.

Fig. 1. Lamium album. *White Dead Nettle.*
45—42.

a Part of a whirl of flowers, ſhowing how they grow in the boſom of a leaf.

b A ſingle flower, ſhowing the ſtructure of a labiate or ringent corol, and of that of the Lamium in particular.

c The corol cut away, in order to ſhow more diſtinctly the ſituation of the ſtamens and the claſſical character.

d The germs, with the ſtyle.

e The calyx, with the four ſeeds within it.

Fig. 2. Antirrhinum majus. *Snapdragon,*
319—315.

a The cloſed ringent, or perſonate corol, in its natural form.

b The corol opened, to ſhow the ſituation of the ſtamens.

c The capſule, with the permanent ſtyle and calyx.

Fig. 3. Digitalis purpurea. *Purple Fox-glove.* 320—317.

a A ſingle flower, ſhowing the open bell-ſhaped corol.

b The inſide, exhibiting the ſituation and ſtructure of the ſtamens.

c The germ, with the ſtyle.

d The capſule, with the ſtyle permanent.

e A ſection of the capſule.

f A capſule, deprived in part of its outer ſkin, to ſhow the interior texture of the coat.

Obſ. *c* in Fig. 1. and *b* in Fig. 3. will ſerve to correct an error in p. 310—306. where it ſhould have been ſaid, *the outer pair* [of ſtamens] *longer than the other.*

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PLATE V. LETTER V.

UMBELLATE FLOWERS.

Fig. 1. Apium Petroſelinum. *Garden Parſley.* 61, 243—56, 237.

Fig. 2. Aethuſa Cynapium. *Fool's Parſley.* 60 — 56.

a The three long leaflets of the partial involucre, ſhowing a principal difference between this and the true Parſley.

Fig. 3. Scandix Cerefolium. *Garden Chervil.* 60, 234 — 56, 228.

Fig. 4. Sambucus nigra. *Common Elder.* 57 — 53.

To ſhow the difference between that and an umbellate plant.

Fig. 5. The flower of an umbellate plant magnified, to ſhow the particular ſtructure detailed in p. 55, 56 — 51, 52.

Obſ. Inſtances of compound umbels in Fig. 1, 2, 3, and Fig. 1, 2, of Plate XIII. A ſimple umbel is repreſented at Fig. 3, Plate XIII.

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PLATE VI. LETTER VI.

COMPOUND FLOWERS.

Fig. 1. Bellis perennis. *Common Daiſy.*
65 — 60.

a The flower, which is compound and of the radiated kind, having ſemiflorets or ligulate florets in the ray, and tubular florets in the diſk.
b A ſection of the receptacle, with the florets on it.
c A ſemi-floret.
d The cylinder of anthers, with the ſtyle perforating it.
e A floret.

Fig. 2. Leontodon Taraxacum. *Dandelion.*
68 — 63.

a The whole compound flower, conſiſting entirely of ſemi-florets, called by Linnæus ligulate florets.
b A ſingle floſcule.
c The head of ſeeds.

Fig. 3.

Showing a floſculous flower, or a flower composed of florets only, called by Linnæus tubular florets.

a The whole compound flowers.

b A ſingle floſcule.

c The back of a compound flower, ſhowing the calyx.

Fig. 4. Trifolium pratenſe. *Red Clover.*
69 — 64.

To ſhow the difference between this, which is a head or aggregate of flowers, and a genuine compound flower, ſuch as Fig. 1, 2, 3, exhibit.

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PLATE VII. LETTER XI.

MONANDRIA.

Fig. 1. Canna indica. *Indian Shot.*
123 — 117.

a a a Three different views of the flower, the corol cut into ſix lanceolated parts, one of the three interior reflected.
b The ſcabrous germ, with
c The triphyllous perianth, or calyx, on the top of it.
d The anther growing to one of the petals, which ſerves it for a filament.
e The ſtyle, growing to the petaliform filament.
f The ſcabrous capſule.
g Cut open to ſhow the three cells.

Fig. 2. Hippuris vulgaris. *Mare's Tail.*
121 — 115.

a a The germ.
b The ſtamen.
c The ſtyle.

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PLATE VIII. LETTER XII.

DIANDRIA.

Fig. 1. Veronica Chamædrys. *Wild Speedwell.* 129—123.

a The wheel-ſhaped corol, divided into four ſegments, the loweſt *(b)* narrower than the reſt.
c The capſule.
d The oval, wrinkled leaves, indented about the edge.

Fig. 2. Jaſminum officinale. *White Jaſmine.* 127—121.

a A front view of the monopetalous ſalver-ſhaped corol, divided into five ſegments.
b A back view of the corol.
c The tube of the corol, with the anthers lying within it.
d The calyx, with the rudiment of the fruit.
e A leaf pinnated, with all the lobes diſtinct.

Fig. 3. Salvia officinalis. *Garden Sage.*
131 — 125.

a A flower.
b The two ſtamens, ſhowing their ſingular ſtructure.
c The piſtil ſeparate.

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PLATE IX. LETTER XIII.

TRIANDRIA, DIGYNIA. GRASSES.

Fig. 1. Lolium perenne. *Ray Grafs.*
149, 154 — 143, 148.

As an inftance of a fpiked grafs.

Fig. 2. Dactylis glomerata. *Hard Grafs.*

a The chaff or glume.
b b b The three ftamens.
c The two reflected ftyles, with the feathered ftigmas.

Pl. X.

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PLATE X. LETTER XIV.

TRIANDRIA MONOGYNIA.

Iris pumila.

a The ſheath, or ſpathe.

b The corol, conſiſting of ſix parts, united at the baſe.

c c The outer petals, called *falls.*

d d The inner petals, called *ſtandards.*

e e The petal-form ſtigma, each part concealing one ſtamen under it.

f A ſingle ſtamen.

g The germ, inferior or below the corol.

h h The nectary, in a villous line along the reflected petals.

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PLATE XI. LETTER XV.

TETRANDRIA.

Fig. 1. Scabiofa columbaria. *Small Scabious.* 168—162.

An aggregate flower, confifting of many flofcules.

b A fingle flofcule; the corol cut into five irregular fegments, and the germ crowned with hairs.

c The calyx, with the four ftamens and the piftil.

Fig. 2. Rubia peregrina. *Wild Madder.*

An inftance of ftellated plants, 169.

The fquare ftalk: the ftellated leaves: the corol of four fegments: the double germ below the flower.

Fig. 3. Plantago lanceolata. *Ribwort Plantain.* 172—166.

a The flowers growing in a fpike or oblong head.

f The angular ſcape.

c A ſingle flower, exhibiting the quadrifid corol and the very long filaments.

d The germ and ſtyle.

e The calyx, incloſing the capſule,

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PLATE XII. LETTER XVI.

PENTANDRIA MONOGYNIA.

Fig. 1. Nicotiana Tabacum. *Common Tobacco.* 201—195.

a A flower-bud.
b A flower, ſhowing the funnel-ſhaped corol diſplayed.
c The corol removed, to ſhow the five ſtamens and piſtil.
d A tranſverſe ſection of the capſule.

Fig. 2. A flower of Dodecatheon Meadia 181—175.

Fig. 3. Convolvulus ſepium. *Great Bind-Weed.* 190—184.

a The corol, with the involucre immediately below it, at Fig. 3.
b The five ſtamens diſplayed.
c The germ, within the calyx, with the ſtyle, terminated by the two ſtigmas.

Fig. 4. Lonicera Caprifolium. *Garden Honeysuckle.* 210—204.

a A flower, exhibiting the irregular monopetalous corol.

b The tube opened, to show the manner in which the filaments are fixed.

c The pistil.

Fig. 5. Vinca major. *Great Periwincle.* 220—214.

a The corol, showing the bending of its five divisions, and the pentagon form of the *faux*, or opening of the tube.

b The calyx divided to the bottom into five segments; and the pistil with two stigmas, one over the other.

c The tube of the corol opened, to show the situation of the five stamens and form of the anthers.

d A single stamen separate.

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PLATE XIII. LETTER XVII.

PENTANDRIA DIGYNIA.

Fig. 1. Sium nodiflorum. *Creeping Water Parſnep.* 236—230.

To ſhow the difference between this plant and water creſſes, repreſented in Plate XXI.

a A pinnated leaf, the pinnæ, ſmall or component leaves, longer and narrower than thoſe of water creſſes, ſerrated on the edges and pointed at the end; the terminating pinna trifid.

b A ſeſſile umbel of flowers.

c A ſingle flower.—*d* The fruit.

Fig. 2. Scandix Anthriſcus. *Hemlock Chervil.* 234—228.

To ſhow the difference between that and *Garden Chervil*, Plate 5, Fig. 3.

a An umbel of flowers.

b An umbel of fruits.

Fig. 3. Scandix Pecten. *Shepherd's Needle*, or Venus's Comb. 245—239.

a The umbels, being inſtances of a ſimple umbel.

b The ſeeds, terminated by the long proceſſes or beaks, which gave occaſion to the names.

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PLATE XIV. LETTER XVIII.

HEXANDRIA.

Fig. 1. Tradeſcantia Virginica. *Virginian Spiderwort.* 251 — 245.

a The corol of three petals.
b b The three-leaved calyx.
c One of the fringed filaments.
d The piſtil.

Fig. 2. Narciſſus Tazetta. *Polyanthus Narciſſus.* 252 — 246.

a The corol in front, ſhowing the ſix equal petals, and the funnel or cup-ſhaped nectary.
b A back view of the flower, ſhowing that the corol is ſuperior, or on the top of the germ.
c The ſpathe.
d The corol opened, to ſhow the ſituation of the ſix ſtamens within the nectary.
e The piſtil.

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PLATE XV. LETTER XIX.

HEPTANDRIA.

Fig. 1. Æſculus Hippocaſtanum. *Horſe Cheſnut.* 262 — 256.

a The corol of five petals, and the ſeven ſtamens, with bending filaments.
b The one-leafed calyx, ſwelling at the baſe, and divided at top into five ſegments.
c The young capſule terminated by the ſtyle.
d A ſingle ſtamen.

OCTANDRIA.

Fig. 2. Oenothera biennis. *Tree Primroſe.* 263 — 257.

a A flower, ſhowing the four-parted calyx, and the corol of four obcordate petals.
b The eight ſtamens, and the piſtil in the middle, with the deflected calyx.
c The piſtil, with the filiform ſtyle and the quadrifid ſtigma.
d The capſule.
e A tranſverſe ſection of the capſule, ſhowing the four cells.
f The ſeeds.

Fig. 3. Epilobium anguſtifolium. *French Willow.* 264—258.

a The flower.
b The four-leaved calyx.
c The ſtamens, four longer and four ſhorter.
d A ſingle ſtamen.
e The piſtil.
f The capſule.
g A ſeed crowned with down.

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PLATE XVI. LETTER XIX.

ENNEANDRIA HEXAGYNIA.

Fig. 1. Butomus umbellatus. *Flowering Rush.* 272—266.

a The flower of six petals.
b The nine stamens.
c The six capsules.

DECANDRIA MONOGYNIA.

Fig. 2. Dictamnus albus. *Fraxinella.* 273—267.

a The flower, with a corol of five spreading petals.
b The five-leaved calyx, with the capsules.
c A single filament, with its glandules.

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PLATE XVII. LETTER XX.

DODECANDRIA DODECAGYNIA.

Sempervivum tectorum. *Common Houſeleek.*
290—285.

a The flower-ſtem, with a reflexed range of flowers.

b A flower in front, ſhowing the corol of twelve petals.

c The calyx, with the capſules, after the flower is paſt.

d A ſingle capſule.

e The twelve ſtamens and twelve ſtyles, ſeparated from the flower.

f A ſingle piſtil, exhibiting the germ, ſtyle, and anther.

g Two ſtamens.

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PLATE XVIII. LETTER XXI.

ICOSANDRIA.

Fig. 1. Myrtus communis. *Common Myrtle.*
295—290.

a The corol.
b The fruit or berry.
c A ſingle flower without the corol, ſhowing the ſtamens proceeding from the calyx.

Fig. 2. Pyrus Cydonia. *The Quince.*
79—74, and 297—292.

Obſ. The letter *a* is by miſtake placed too low in the plate.

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PLATE XIX. LETTER XXI.

POLYANDRIA.

Fig. 1. Caltha paluſtris. *Marſh Marigold.*

a A flower ſhowing the corol of five petals, the many ſtamens ſhorter than the corol, &c.

b Another flower, ſhowing that it has no calyx.

c The capſules, after the flower is paſt.

Fig. 2. Papaver Rhoeas. *Corn Poppy.*
301 — 296.

a The corol of four large roundiſh petals.

b The numerous ſtamens proceeding from the receptacle.

c The capſule crowned with its ſtigma.

Obſ. Fig. 1. is an inſtance of the order Polygynia. Fig. 2. of the order Monogynia.

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PLATE XX. LETTER XXII.

DIDYNAMIA GYMNOSPERMIA.

Fig. 1. Glechoma hederacea. *Ground Ivy.*

311 — 307.

a The kidney-ſhaped leaves.

b The ringent flowers.

c A flower opened, to ſhow the ſituation of the ſtamens.

d A flower exhibiting the cruciform appearance of the anthers.

e The calyxes.

f A ſingle filament.

g The piſtil.

DIDYNAMIA ANGIOSPERMIA.

Fig. 2. Bignonia radicans. *Trumpet Flower.*

321 — 317.

a The calyx.

b The corol.

c The corol diſplayed, to ſhow the ſituation of the ſtamens.

d The piſtil.

Obſ. The claſſical character is clearly ſhown at Fig. 2. *c.*

This claſs was farther illuſtrated in Plate IV.

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PLATE XXI. LETTER XXIII.

TETRADYNAMIA.

Sisymbrium Nasturtium. *Water Cress.*
330, 236 — 327, 230.

a a The pinnated leaves.
b The odd lobe ending blunt.
c The corymb of flowers.
d A single four-petalled cruciform flower.
e A single petal.
f The calyx.
g The calyx, with the stamens.
h A single stamen.
i The silique.

Compare Plate XIII. *See also Plate* II.

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PLATE XXII. LETTER XXIV.

MONADELPHIA.

Fig. 1. Althæa officinalis. *Marsh Mallow.*
344 — 341.

a The flower showing the five petals united at bottom, obcordate or inversely heart-shaped, and slightly emarginated or end-nicked. In the centre is the column of stamens, with the pistils in the middle of them.

b The column of stamens and pistils removed from the corol, and showing the rudiment of the fruit underneath.

c The pistil separate.

d The calyx, exhibiting the nine divisions of the outer calyx, which is one of the principal generic characters.

Fig. 2, Malva sylvestris. *Common Mallow.*
344 — 341.

a The flower as before. The petals narrower, heart-shaped, and much more deeply end-nicked.

b c The column of stamens, and pistil separated.

d The fruit, with the double calyx; the outer very narrow, the clefts of the inner broad and large: there are five of theſe and three diſtinct leaves in the other; but all of them could not be repreſented. The fruit flat, with many ſeeds in a ring, each covered with its aril, or looſe coat.

Fig. 3. Geranium zonale. *Horſe-ſhoe Craneſ-bill.* 338—333.

a The flower, ſhowing the corol of five unequal petals, with the column of ſtamens, very ſlightly connected at bottom, and of unequal lengths.

b The calyx, with the column of ſtamens. Both theſe figures ſhow the ſtyle ſtanding up above the ſtamens, and terminated by five ſtigmas.

c The fruit, with the permanent ſtyle and ſtigmas; ſhowing the beaked form of it, and the five ſeeds in their arils, each terminated by a tail, and ſeparating from the beak. *a b c* ſhow that the calyx is ſingle and five-leaved.

N. B. Theſe figures ſerve to explain the claſs *monadelphia* (97—92.): and two of the orders, *decandria*, Fig. 3, and *polyandria*, Fig. 1, 2.

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PLATE XXIII. LETTER XXV.

DIADELPHIA DECANDRIA.

Lathyrus latifolius. *Everlaſting Pea.*
361 — 358.

Fig. 1. A bunch of flowers, in their natural ſize and ſituation.

Fig. 2. The banner.

Fig. 3. One of the wings.

Fig. 4. The keel.

Fig. 5. The ſtamens and piſtil in their natural ſituation.

Fig. 6. The ſtamens, ſhowing the ſimple filament ſeparate from the compound one.

Fig. 7. The piſtil.

See Plate III.

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PLATE XXIV. LETTER XXV.

POLYADELPHIA.

Hypericum Aſcyron. *Garden Tutſan.*

374, 377 — 371, 374.

a The flower, with a corol of five petals and the numerous ſtamens in the middle.

b A ſingle pencil or parcel of ſtamens.

c The permanent five-parted calyx, including the germ terminated by five piſtils.

b Explains the characters of the claſs and order—Polyadelphia Polyandria, p. 98, 93, and 118—112.

Pl. XXV.

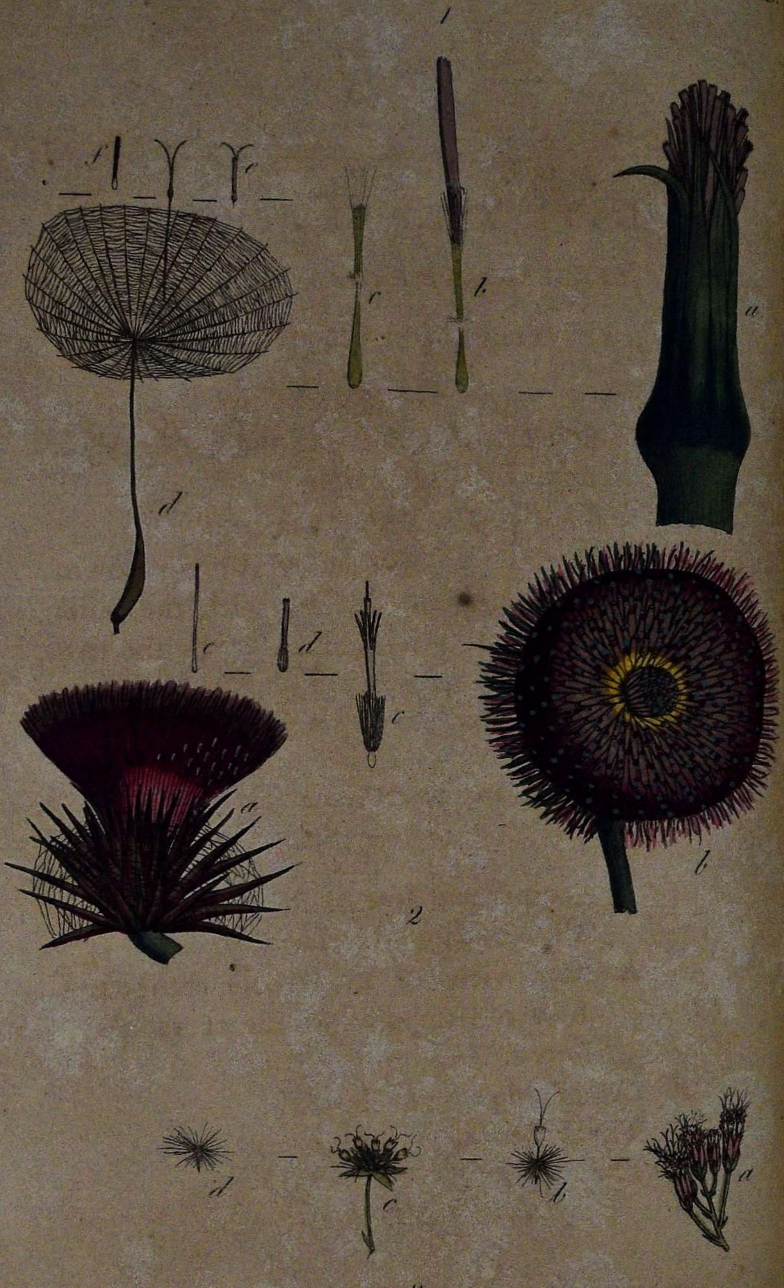

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PLATE XXV. LETTER XXVI.

SYNGENESIA POLYGAMIA ÆQUALIS.

Fig. 1. Tragopogon porrifolium. *Salſafy.*
382 — 379.

a A flower cloſed, ſhowing the ſimple calyx.
b A ſingle ligulate floſcule.
c A floſcule, deprived of the corol.
d A ſeed, with the feathered ſtipitate down.
e The cylinder of anthers, with the piſtil perforating it, terminated by the two revolute ſtigmas.
f The cylinder of anthers alone.

Fig. 2. Carduus nutans. *Muſk Thiſtle.*
385 — 382.

a The compound flower, ſhowing the calyx all imbricate with thorny ſcales.
b A front view of the whole compound flower, compoſed wholly of tubulous florets.
c A ſingle floſcule or floret.
d The cylinder of anthers.
e The piſtil.

Fig. 3. Eupatorium cannabinum. *Common Hemp Agrimony.* 387 — 384.

a A bunch of flowers.
b A ſingle flower.
c A ſingle bunch of flowers.
d The down.

Obſ. Theſe three figures explain the three ſections of this order. 1. Containing compound flowers with ligulate florets only. 2. The capitate, or headed flowers, with tubulous florets only. 3. The diſcoid, or naked diſcous flowers, with tubulous florets, but not in a head.

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PLATE XXVI. LETTER XXVI.

SYNGENESIA POLYGAMIA SUPERFLUA.

Doronicum pardalianches. *Common Leopard's Bane.* 397—394.

a The compound radiated flower, confifting of regular tubulous flofcules in the difk, and irregular ligulate flofcules in the ray.

b The under part of the flower, fhowing the double row of fcales to the calyx.

c One of the femi-florets, or ligulate flofcules, taken from the ray, to fhow that the feed is naked, or deftitute of down.

d A floret from the difk, the feed of which is crowned with a fimple down.

e A fection of the difk, in order to exhibit the naked receptacle.

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PLATE XXVII. LETTER XXVI.

SYNGEN. POLYG. FRUSTRANEA and NECESSARIA.

Fig. 1. Centaurea montana. *Mountain Blue Bottle.* 405—402.

a The compound flower, ſhowing the neutral or barren florets on the outſide, longer than the fertile ones in the middle, and the ciliated ſcales of the calyx.

b A barren floret.

c A fertile floret, with ſome of the briſtles at the baſe.

d The ſame, diveſted of the corol.

e The piſtil.

N. B. This ſerves to explain the order Polygamia Fruſtranea in the claſs Syngeneſia. 118—112.

Fig. 2. Calendula officinalis. *Garden Marigold.* 406—403.

a The compound radiated flower.

b The calyx, with the ſeeds in the ray only, bending inwards after the florets are decayed.

c The boat-ſhaped muricated ſeed, without down.

d A barren ſeed, from one of the central flowers.

e A fertile floſcule from the ray.

f A barren floſcule from the diſk.

N.B. This ſerves to explain the order Polygamia Neceſſaria in the claſs Syngeneſia. 118—112.

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PLATE XXVIII. LETTER XXVI.

SYNGEN. POLYG. SEGREGATA.

Echinops ſphærocephalus. *Globe Thiſtle.*
406—403.

a The entire compound flower, conſiſting of tubular florets, ſeparated by their proper perianths; which determines this plant to be of the ſegregate order in the claſs Syngeneſia.

b A ſinuated leaf, the jags ending in ſpines.

c A ſingle floſcule in its calyx.

a A floſcule taken out of the calyx, with the ſtyle ſeparate.

e A ſingle ſubulate leaflet of the calyx, in three different views.

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PLATE XXIX. LETTER XXVI.

SYNGENESIA MONOGAMIA.

Viola odorata. *Sweet Violet.* 407—404.

a The calyx of five leaves.
b The corol of five irregular petals.
c The horn-ſhaped nectary.
d A flower opened, to ſhow the ſtamens with the five connected anthers.
e The ſtamens within the calyx.
f A ſingle ſtamen.
g The piſtil.
h h h The heart-ſhaped leaves.
i i The young leaves, involuted, rolled inwards, or rather upwards.
k k k The ſcape, with the double bracte on the middle of it.
l One of the ſtolones, or runners, putting forth roots.

Pl. XXX

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PLATE XXX. LETTER XXVII.

GYNANDRIA.

Paſſiflora cærulea. *Blue Paſſion Flower.*
425—422.

a The palmated leaf.
b The corol and calyx, each of five leaves, and having the ſame appearance in front.
c The radiate crown, which is the nectary.
d The piſtil and five ſtamens.
e The anthers terminating the filaments, which ſpring from the bottom of the germ, where it meets the pedicle, upon which it ſtands.
f f f The three ſtigmas ariſing from the germ.

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PLATE XXXI. LETTER XXVIII.

MONOECIA.

Momordica Elaterium. *Spirting Cucumber.*

452—449.

a a The male or ſtaminiferous flowers.

b b The female or piſtilliferous flowers, with the large germ below the receptacle.

c The male flower, ſhowing the three filaments, with double anthers on two of them, and a ſimple anther on the third.

d The germ, ſurmounted with the ſtyle, divided into three parts, each part ſuſtaining an oblong gibbous ſtigma.

e The divided part of the ſtyle, with the ſtigmas.

f Two different views of a ſingle ſtigma.

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PLATE XXXII. LETTER XXIX.

DIOECIA.

Cannabis ſativa. *Hemp.* 457—454.

Fig. 1. *Female Hemp.*

a A ſingle female flower.

b The ſeed included within the calyx.

Fig. 2. *Male Hemp.*

a Male flowers ſeparate.

Pl. XXXIII.

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PLATE XXXIII. LETTER XXX.

POLYGAMIA MONOECIA.

Acer campeſtre. *Common Maple.*

a a The lobed leaves.

b b Bunches of flowers. — *c* Perfect. — *d* Male, with ſtamens only.

e A ſingle perfect flower.

f A petal.

g A perfect flower diveſted of the corol and calyx.

h A ſingle ſtamen.

i The piſtil, with the two revolute ſtigmas, and the rudiment of the two capſules, terminating in a wing.

k A male, or ſtaminiferous flower, and a ſingle petal of it.

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PLATE XXXIV. LETTER XXXI.

NECTARIES.

Fig. 1. Aconitum Napellus. *Blue Monk's Hood.* 478—475. 304—299.

a a The two recurved pedunculated nectaries.

b A ſingle nectary, taken out of the flower.

Fig. 2. Delphinium Ajacis. *Garden Larkſpur.* 478—475. 304—298.

a The nectary, continued backward in form of a horn or ſpur.

Fig. 3. Parnaſſia paluſtris. 247—241. 474—471.

a A flower, with the nectareous ſcales at the baſe of the ſtamens.

b The five heart-ſhaped nectaries, terminating in hairs, with a little ball on the top of each, and placed between the ſtamens.

Fig. 4. A petal of the Ranunculus, ſhowing the honied gland juſt above the baſe, on the inſide at *a a.*

308—303. 472—475.

Fig. 5. Iris or Flag. The nectary, in form of a villous line, along the middle of one of the reflexed petals.
162 — 156. 473 — 476.

Fig. 6. Fritillaria Imperialis. *Crown Imperial.* 473 — 476.

a An excavation at the base of the petal, which is the nectary.

Fig. 7. Asphodelus luteus. *Yellow Asphodel.* 472 — 475.

a The flower, showing the six stamens, each sitting on its valve, and the six valves forming an arch over the germ.

b A single filament on its scale, which is inserted into the base of the petal.

Fig. 8. Helleborus fœtidus. *Stinking Black Hellebore.* 305 — 300.

a The tubular nectaries placed in a ring at the base of the stamens.

b A single nectary.

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PLATE XXXV. LETTER XXXII.

CRYPTOGAMIA FILICES. Ferns.

Oſmunda Spicant. *Rough Spleenwort.*
490—487.

Fig. 1. The barren frond.

Fig. 2. The fertile frond.

Fig. 3. A ſingle pinna magnified, with the ſcales at *a a*; and covers of the capſules at *b b*.

Fig. 4. A part of the pinna, more magnified, with the anthers on the rib at *a*, and the membrane rolled back at *b b*, to exhibit the rudiments of the ſeed-veſſels at *c c*.

PLATE XXXVI. LETTER XXXII.

CRYPTOGAMIA MUSCI. Moſſes.

495—492.

Bryum pyriforme. *Pear Bryum.*

Fig. 1. The moſs of its natural ſize.

Fig. 2. The anthers yet entire.

Fig. 3. The female flower, while it is yet incloſed within the inmoſt leaves.

Fig. 4. The ſame ſeparated, with the appendages, viz. *a a* the adductors. *b b* the cylindrical jointed threads.

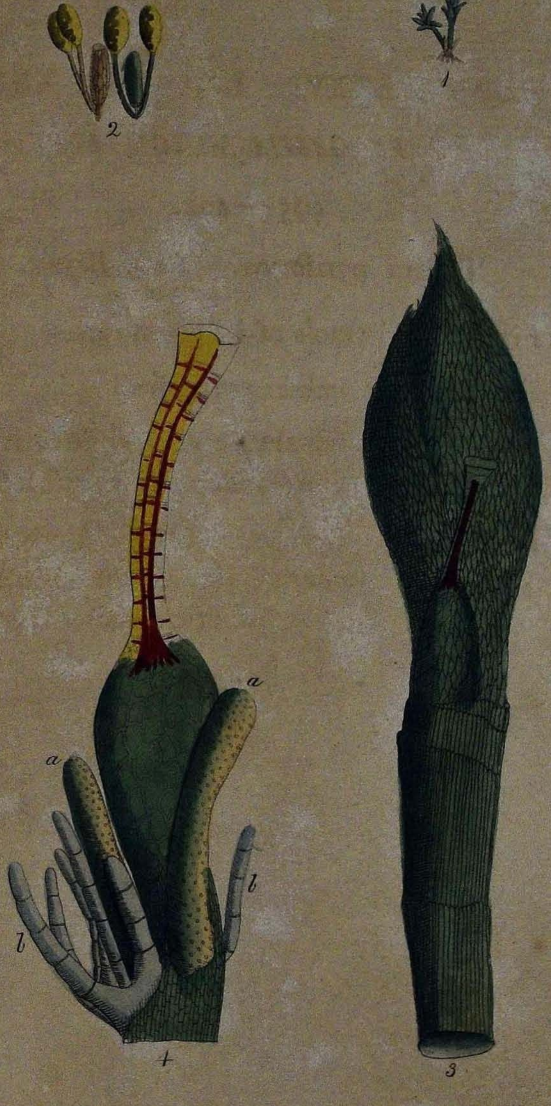

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PLATE XXXVII. LETTER XXXII.

CRYPTOGAMIA ALGÆ.

Lichen ciliaris. *Ciliated Liverwort.*

Fig. 1. The plant of its natural ſize.

Fig. 2. The ſame magnified.

a a The male or barren flowers.

b b The females in a ſtate of ripeneſs.

c c The rooting hairs.

d d The hairs, or ciliæ, growing on the extremities.

Fig. 3. The ſeeds magnified.

PLATE XXXVIII. LETTER XXXII.

CRYPTOGAMIA FUNGI. Funguses.

501—498.

Agaricus Dillen. giss. p. 185.

Fig 1. Plants of different ages, and of their natural size.

a Is the Fungus in its perfect or adult state.

b The same in its middle state.

c Small plants just rising.

Fig. 2. A parcel of knotted threads from the fungus marked *b*, supposed to be the stamens.

Fig. 3. A section of the cap *(a)* and lamella *(b)* of the same small fungus magnified.

Fig. 4. The ripe seeds of this fungus much magnified.

Obs. These four plates are copied from Hedwig's Theoria, as it would have answered little purpose to figure such minute plants of their natural size only.

THE END.

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